

can be seen; this station is in the low ground along the creek where *B. congesta* is naturally to be expected, but where cattle had been pastured, and where (being late in the season) it might easily have been destroyed. *B. ida-maia* is found everywhere in this vicinity, not only in the low ground, but on the slopes of the hills on both sides of the creek valley and pretty well up towards the top; but *B. venusta* is only found in the richer ground along the creek and here only am I able to find *B. congesta*. Both *B. congesta* and *B. venusta* appear to be earlier than *B. ida-maia*.

Brodiaea venusta appears to me to be a hybrid, not merely because it grows only (in this locality) where the other species are found, but from a comparison of its morphological characters with those of *B. congesta* and *B. ida-maia*. This idea is, of course, tentative and could be discredited by finding it occurring in some locality where one or both of the others are not found. The seeds of *B. venusta* should be collected and grown.

Brodiaea stellaris is quite abundant at one place on the south side of Yager Creek. This spot has a northeastern exposure. I do not see it anywhere else. Mr. Joseph Tracy has, however, collected it a short distance east on the north side of the creek. The spot where it is plentiful (my station) is not more than 20 or 30 feet across, in a shaded situation and moist, clayey soil. I find these plants to differ in minor particulars from the formal description of *B. stellaris* as follows: (a) length of scape 6 to 12 in.; (b) corm spherical; (c) wings purple and as long as anthers (though not as high), strictly approximate, curved under at top, thus partly concealing stamens and stigma; (d) perianth segments not narrow.

Santa Rosa Junior College, 1923.

VARIATION IN THE PAPPUS OF *LAYIA PENTACHAETA* GRAY

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The collection, which formed the basis of *Layia pentachaeta* was collected by Dr. J. M. Bigelow in May, 1854, at Knights Ferry on the Stanislaus River, Stanislaus County. The species was published by Asa Gray in the Pacific Railroad Report, volume 4, page 108, in 1857. There is an excellent plate (plate 16). The type is in the Gray Herbarium, and has been examined through the courtesy of the Curator, Dr. B. L. Robinson. Of the flowers belonging to the type which were examined, some fifteen, all showed five naked pappus bristles. On general morphologic and phylogenetic grounds one may consider five to be the ancestral number in this form. Variations from this number are indicated by the following specimens: (1) Simpson Ranch, Sweetwater Creek, Eldorado County, K. Brandegee; pappus bristles one to five, naked at base; in one head the variation was one, two, three, four. (2) Simpson Ranch, Sweetwater Creek, K. Brandegee, pappus bristles nearly always none; two flowers were found in separate heads, each having one naked awn about half as long as corolla. (3) Simpson Ranch, Sweetwater Creek, K. Brande-

gee, pappus bristles usually none; in one head a flower was found with one bristle half as long as corolla and another flower with one bristle about one-fifth as long as corolla. (4) Roseville, T. Brandegee, pappus uniformly none. (5) Forest Hill, Placer County, H. N. Bolander 4579, pappus none in one individual, pappus bristles two or three in other individuals. (6) Fresno County, C. C. Parry 141, pappus none. While so very diverse in pappus character, these various specimens and others of the same general character aggregate naturally as the specific unit, *Layia pentachaeta*, which in this, its typical form, ranges from Placer County to Fresno County between 500 and 3000 feet. The peculiarity of the rather extreme variations in the pappus characters (each of which is very sharp and definite) suggests the influence of spontaneous crossing. The species flowers in April and May.

Another form likewise inhabits the Sierra Nevada foothills, often growing in the same localities as the form which integrates the botanical type. This second form bears flowers which exhibit 10 to 18 pappus bristles, but aside from pappus, the plants in every other respect, in habit, aspect, pubescence and size, appear to be quite conspecific with the plants of the five-bristled form. It is desirable to define this form by name and it is here called var. *HANSENI* Jepson n. var. (type Fisher's Cabin, Mokelumne River, Amador Co. foothills, Geo. Hansen 411). This state differs from the botanical type of the species, not merely in number of bristles but also in bearing on the crown (between the bristles) a series of soft and delicate straight hairs, making a sort of basal tuft. It seems likely that this state is the more common of the two. It may well be the primitive state in this whole pentachaeta group, the five-bristled form having been derived from it by reduction. The following collections are noted: (1) Simpson Ranch, Sweetwater Creek, K. Brandegee, pappus bristles about 15. (2) Fisher's Cabin, Mokelumne River, Geo. Hansen 411, pappus bristles about 10 to 14. (3) Folsom, T. Brandegee, pappus bristles about 11 or 12. (4) Merced foothills, Buckminster, pappus bristles about 10; one flower was found that had the 10 bristles common to the other flowers on the plant but was destitute of the short soft hairs.

NOTES AND NEWS

Commercial exploitation of rare indigenous species of flowering plants takes on each year new and undesirable phases. In 1928 a large number of individuals of the California Pitcher Plant (*Darlingtonia californica* Torr.), uprooted from their native swamps in the mountains, were offered for sale by street peddlers in central California cities. During one week, in March, 1928, about one thousand such plants were sold in Stockton, according to Mr. J. A. Sanford, a long time member of this Society. The practice is all the more reprehensible in that practically no gardens furnish conditions under which *Darlingtonias* will thrive.—W. L. J.